S I JULY, 1901 No. 1.

QUARTERLY BULLETIN

OF

NORTHWESTERN UNIVERSITY

DENTAL SCHOOL

COR. FRANKLIN AND MADISON STS.
CHICAGO, ILL.

CIRCULAR OF INFORMATION

SESSION OF 1901 - 1902
BEGINS OCT. 2, 1901.

LAST DAY ON WHICH STUDENTS MAY ENTER THIS SESSION AND RECEIVE CREDIT FOR FULL TERM'S ATTENDANCE, OCTOBER 12, 1901.

The Bulletin of Northwestern University Dental School is published quarterly by Northwestern University. Entered at the Postoffice in Chicago as second-class mail matter.

ANNOUNCEMENTS.

1901.	
	Examination of Credentials for Admission on Application.
October 2.	Opening Exercises at 7:30 P. M. Wednesday.
October 1-15.	Examination for Advanced Standing.
November 28.	Thanksgiving.
December 20.	First Semester ends. Christmas Vacation begins.
1902.	
January 6.	Christmas Vacation closed. Second Semester begins.
April 14-19.	Senior Examinations.
April 21-29.	Junior and Freshman Examination.
May 1.	Commencement.
October 1.	Session of 1901 - 1902 begins.

Note.—Return Tickets for students going home for Christmas vacation will be given out only on December 21.

NORTHWESTERN UNIVERSITY.

CORPORATION.

OFFICERS.

WILLIAM DEERING ..... President.
THE HON. OLIVER HARVEY HORTON, LL.D. ... First Vice-President.
THE HON. H. H. C. MILLER, A.M. ..... Second Vice-President.
FRANK PHILIP CRANDON, A.M. ..... Secretary.
GEORGE PECK MERRICK, LL.B. ..... Assistant Secretary.
ROBERT DICKINSON SHEPPARD, D.D. ..... Agent and Treasurer.

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TERM EXPIRES IN 1901.

NORMAN WAITE HARRIS ..... Chicago.
NATHAN SMITH DAVIS, JR., A.M., M.D. ..... Chicago.
HARVEY BOSTWICK HURD, LL.D. ..... Evanston.
JOHN RICHARD LINDGREN ..... Evanston.
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HENRY WADE ROGERS, LL.D. ..... Evanston.
BURNS DURBIN CALDWELL ..... New York City.
CHARLES BOWEN CONGDON ..... Evanston.
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TERM EXPIRES IN 1903.

THE HON. OLIVER HARVEY HORTON, LL.D. ..... Chicago.
WILLIAM DEERING ..... Evanston.
MERRITT CALDWELL BRAGDON, A.M., M.D. ..... Evanston.
MRS. MARY R. SHUMWAY ..... Evanston.
WILLIAM ALDEN FULLER ..... Chicago.
JAMES BARTLETTT HOBBS ..... Chicago.

Frank Philip Crandon, A.M.....Evanston.
The Hon. Lorin Cone Collins, A.M.....Chicago.
The Hon. William Andrew Dyche, A.M.....Evanston.

TERM EXPIRES IN 1904.

Robert Dickinson Sheppard, D.D.....Evanston.
Josiah J. Parkhurst.....Evanston.
Charles P. Wheeler.....Evanston.
David McWilliams.....Dwight.
Frank Orren Lowden.....Chicago.
Nina Grey Lunt.....Evanston.
Gustavus Franklin Swift.....Chicago.
Henry Howard Gage.....Evanston.
The Hon. Lyman Judson Gage.....Washington, D. C.

ELECTED BY CONFERENCES.

ROCK RIVER.

Rev. William Anson Spencer, A.M., D.D.....Philadelphia.
Rev. John Patrick Brushingham, D.D.....Chicago.

DETROIT.

Rev. Joseph Flintoft Berry, D.D.....Chicago.
*Rev. Arthur Edwards, A.M., D.D.....Chicago.

CENTRAL ILLINOIS.

Rev. George R. Palmer, A.M., D.D.....Onarga.
Rev. J. Wellington Frizzelle.....Rock Island.

MICHIGAN.

Rev. George Smith Hickey, A.M., D.D.....Detroit, Mich.
Rev. Edward George Lewis, S.T.B., D.D.....Grand Rapids.

GENERAL EXECUTIVE COMMITTEE.

William Deering.
Oliver H. Horton, LL.D.
Frank Philip Crandon, A.M.
H. H. C. Miller, A.M.
John Richard Lindgren.
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Milton Hollyday Wilson.
James B. Hobbs.
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William A. Dyche, A.M.
Robert Dickinson Sheppard, D.D.
Henry Howard Gage.
Daniel Bonbright, LL.D.

*Deceased.

NORTHWESTERN UNIVERSITY DENTAL SCHOOL is one of the great group of literary and professional schools constituting Northwestern University, situated at Evanston and Chicago.

The College of Liberal Arts is at Evanston.

The professional schools are in Chicago.

NORTHWESTERN UNIVERSITY comprises the following degree-conferring departments, each having its distinct faculty of instruction, with Daniel Bonbright, LL.D., acting President of the University and *ex-officio* President of the faculty of each department.

COLLEGE OF LIBERAL ARTS.

DANIEL BONBRIGHT, LL.D., Dean.
GEORGE ALBERT COE, PH.D., Secretary.....Evanston.

NORTHWESTERN UNIVERSITY MEDICAL SCHOOL.

FRANK SEWARD JOHNSON, A.M., M.D., Dean.
NATHAN SMITH DAVIS, JR., A.M., M.D., Secretary.....Chicago.

NORTHWESTERN UNIVERSITY LAW SCHOOL.

PETER STENGER GROSSCUP, A.M., LL.D., Dean.
EDWARD AVERY HARRIMAN, Secretary.....Chicago.

NORTHWESTERN UNIVERSITY SCHOOL OF PHARMACY.

OSCAR OLDBERG, PHARM.D., Dean.
ALBERT SCHNEIDER, PH.D., M.D., Secretary.....Chicago.

NORTHWESTERN UNIVERSITY DENTAL SCHOOL.

GREENE V. BLACK, M.D., D.D.S., Sc.D., LL.D., Dean.
WILLIAM EDWARD HARPER, D.D.S., Secretary.....Chicago.

NORTHWESTERN UNIVERSITY WOMAN'S MEDICAL SCHOOL.

ELIZA H. ROOT, M.D., Dean.....Chicago.
JOHN RIDLON, M.D., Secretary.....Chicago.

NORTHWESTERN UNIVERSITY SCHOOL OF MUSIC.

PETER CHRISTIAN LUTKIN, A.G.O., Dean.....Evanston.

SCHOOLS OF THEOLOGY.

GARRETT BIBLICAL INSTITUTE.

CHARLES JOSEPH LITTLE, D.D., LL.D., President.....Evanston.

NORWEGIAN-DANISH DEPARTMENT.

NELS E. SIMONSEN, A.M., D.D., Principal.....Evanston.

SWEDISH THEOLOGICAL SEMINARY.

ALBERT ERICSON, A.M., D.D., President.....Evanston.

NORTHWESTERN UNIVERSITY
DENTAL SCHOOL.

FACULTY.

DANIEL BONBRIGHT, LL.D., *Acting President of the University.*

GREENE VARDIMAN BLACK, M.D., D.D.S., SC.D., LL.D., *Dean, Professor of Operative Dentistry, Pathology and Bacteriology.*

THOMAS LEWIS GILMER, M.D., D.D.S., *Professor of Oral Surgery.*

JOHN SAYRE MARSHALL, M.D., *Professor Emeritus of Oral Surgery.*

ELGIN MAWHINNEY, D.D.S., *Professor of Special Pathology, Materia Medica and Therapeutics.*

EDMUND NOYES, D.D.S., *Professor of Dental Jurisprudence and Ethics.*

WILLIAM EDWARD HARPER, D.D.S., *Professor of Operative Technics, Assistant Professor of Operative Dentistry. Secretary of the Faculty.*

JAMES HARRISON PROTHERO, D.D.S., *Professor of Prosthetic Technics, Prosthetic Dentistry and Metallurgy.*

FREDERICK BOGUE NOYES, B.A., D.D.S., *Professor of Histology.*

TWING BROOKS WIGGIN, M.D., *Professor of Physiology and Pathology.*

VERNON JAMES HALL, PH.D., *Professor of Chemistry.*

GEORGE A. DORSEY, PH.D., *Professor of Comparative Anatomy.*

CHARLES LEWIS MIX, M.D., *Professor of Anatomy.*

MILAND A. KNAPP, D.D.S., *Professor of Orthodontia.*

D. WILLARD CRAIG, M. D., *Lecturer on Anaesthesia.*

FRED WILLIAM GETHRO, *Lecturer on Operative Technics.*

THE DEMONSTRATORS.

As the demonstrating force does not receive appointment until September, those for 1901-1902 cannot be given in this announcement. Each year a number of the members of the old force is retained and new demonstrators are appointed, mostly from those of the graduating class who by especial merit received this distinction.

DEMONSTRATORS AND INSTRUCTORS OF 1900-1901.

Ralph W. Parker, D.D.S.
Fred W. Parker, D.D.S.
Arthur C. La Touche, D.D.S.
Oscar H. Miller, D.D.S.
Winfred Ross Collie, D.D.S.
Charles Shewey, D.D.S.
Robert Levi McIntosh, D.D.S.
William T. Humphrey, D.D.S.
Waldo P. Johnson, D.D.S.
Reuben C. Traynham, D.D.S.
James W. Birkland, D.D.S.
Geo. B. Macfarlane, D.D.S.
Eugene S. Willard, D.D.S.
Albert Parker Grunn, D.D.S.
Percy B. D. Idler, D.D.S.
Nat. B. W. McCartney, D.D.S.
McGuire Snyder, D.D.S.
Moses Eisenstaedt, D.D.S.
John N. Sandblom, D.D.S.
Oakley Moses Barker, D.D.S.
Walter James Petrie, D.D.S.
Herbert Milton Craig, D.D.S.
Benjamin Waldberg, D.D.S.
Albert Dodge Persons, D.D.S.
Charles H. Converse, D.D.S.
Fred William Gethro, D.D.S.
Alice Steeves, D.D.S.

QUIZ MASTERS.

Eugene S. Willard, D.D.S., *Operative Dentistry and Bacteriology.*
Fred W. Parker, D.D.S., *Materia Medica.*
Ralph W. Parker, D.D.S., *Special Pathology and Therapeutics.*
Robert L. McIntosh, D.D.S., *Oral Surgery.*
Walter J. Petrie, D.D.S., *Prosthetic Dentistry.*
Enos Eli Copple, D.D.S., *Pathology.*
John S. Reece, D.D.S., *Histology.*

DENTAL SCHOOL

Northwestern University Dental School was founded and is maintained by the University, for the purpose of preparing young men and women in the most thorough manner for the practice of dentistry, and for the promotion of dental science and literature. No expense has been spared in its equipment or in the employment of an adequate faculty of skilled teachers, with a large force of demonstrators and assistants.

SPECIAL ANNOUNCEMENT.

Northwestern University takes pleasure in announcing to the dental profession and to students of dentistry that it has secured for a period of years the services of Professor G. V. Black, who devotes his entire time to teaching in the various departments of the dental school, and to superintending the order of instruction and the methods of teaching in all of the departments. He will continue his work in bacteriology and special pathology as heretofore, and in addition thereto will teach operative dentistry in the lecture-hall, and will personally superintend the clinical instruction of both senior and junior classes in the operative clinic room.

Professor Prothero assumes charge of the prosthetic department of the school, giving his entire time to that work. He is provided with special assistants for each section of his department, who will give their entire time to the work, together with an able corps of demonstrators.

In order that Professor Black may give more time to the general supervision of the instruction given in the school, Professor Harper will assume a portion of the work in operative dentistry, and Professor MaWhinney will assume a portion of the work in special pathology.

THE MANAGEMENT.

For the management of the Dental School the University has the services of Dr. G. V. Black, who has the direction of and gives his entire time to the educational work of the school, and of Dr. W. E. Harper, Secretary and business manager, who has the direction of its financial affairs, and also gives a part of his time to teaching. Dr. Black gives his time and attention to the direction of the dental educational features of the school, a duty which his long experience in teaching and wide familiarity with dental literature and educational matters render him especially fitted. It is becoming well known that if a dental school is to succeed well, its business must be judiciously managed, to the end that the most possible may be made of its income for the benefit of its classes. It is equally true that the devising and management of the courses of instruction, the order and modes of the presentation of subjects to pupils, and the arrangement of teachers and students in classes, sub-classes, and sections for lectures, class-work, laboratory exercises, and clinical teaching require constant care and study of a high order to enable students to realize the best results from their efforts during their years of school work.

In order that the realization of these ends may be attained in the highest possible degree, the University has secured this combination in the management of its school.

SITUATION AND SURROUNDINGS.

Northwestern University Dental School is situated on the corner of Madison and Franklin streets, Chicago. Entrance by elevator from Franklin Street. It occupies the fifth, fourth and third floors. It is within the principal business center of the city and in close touch with all of the principal surface and elevated lines of general and suburban travel with the different portions of the city, of its suburbs and the country. Therefore, its students may reside conveniently in any part of the city or its suburbs. This gives them the widest possible range of choice of residence while attending the school without inconvenience in coming and going. It

also gives the school the widest range of territory from which to draw the great clinic so necessary to a great dental school. The material supply for this clinic comes from all parts of the city of Chicago and its suburbs, and is dependent largely upon the personal influence of the students of the school, each one of whom draws from personal friends and acquaintances made in and about their places of residence, patients who make up the personal clinical practice of the individual student under the supervision of the demonstrators in the school. In this the out-of-town student seems to be in no respect less favored than the student whose home is in the city. This gaining and holding a personal clinical practice under the supervision of the instructors in the clinic rooms has come to be one of the features of this school that has a telling effect upon the after-practice of its students; for by this plan of work the student not only learns the theory of practice and the manipulations of practical operations in dentistry, but he passes at once to the work of practical experience in building a practice for himself and in gaining that skill in professional comity and personal manner between himself and his patients which is as necessary to him in after years in drawing together and maintaining a practice as his knowledge of dental diseases and his skill in their treatment.

For these reasons the residence of pupils in groups in widely different portions of the city is favored. This also gives the advantages of a more homelike life while giving in the aggregate a far better conception of life in a great city and decidedly better opportunity to draw upon its advantages while shunning the disadvantages of large gatherings of students in a single locality.

Chicago is a great city and gives many advantages to the student who learns early to avail himself of them. **Lincoln Park** on the north offers, besides its beautiful pleasure grounds, some grand botanical gardens and winter conservatories where all manner of plants may be enjoyed or studied. A fine **zoological collection** where a large variety of animal and bird life may be studied, and the **museum of Natural**

History, in which there is a very large collection of birds, animals, and fossil remains of extinct animal life. **Jackson** and **Washington Parks** on the south, besides their splendid pleasure grounds, also offer splendid botanical gardens and winter conservatories, while the **Field Columbian Museum** offers a rare collection of Natural History specimens especially suited for the study of comparative dental anatomy, and of modern and ancient human skulls and the condition of the teeth in the various races and types of men in different ages. The admission to this museum is free to students on presentation of their matriculation tickets to this school. Many other parks afford favorite pleasure grounds.

A Number of Libraries are accessible to students who have taste for study, or for looking up subjects of interest, scientific, literary, or in connection with special studies.

Chicago Library is on Michigan Avenue and Washington Street, ten minutes' walk from the school. It is one of the finest libraries in the country. Students may receive books from this library when vouched for by responsible persons known to the officials. This library has also many branch offices in different parts of the city, from which books may be received on application. These will often be convenient to the boarding places of students.

The Newberry Library is very large and, besides general works, has also a large medical and dental library. It is on North Clark Street and Walton Place, and may be reached in a fifteen minutes' walk, or by street cars. This is a reference library, and books can be used only in its reading rooms.

The **Columbus Memorial Medical** (and dental) **Library** and reading room is in the Columbus Memorial Building. It is a journal library, containing about all the medical and dental journal literature. Books and journals can be used only in its reading rooms.

The John Crerar Library occupies one floor in the Marshall Field building, corner Wabash Avenue and Washington Street. It is devoted mainly to the natural, the physical and the social sciences, with their applications. It is a very

large and a most excellent collection of books. It is a reference library, and its books are used only in its reading rooms.

These libraries are accessible to our students, and they will find in them not only a very large collection of books, but also men in attendance who are able and willing to assist the student in finding anything that they contain upon any given subject.

There are a large number of other libraries, both general and on special subjects, that are available to the student who may wish to make proper and legitimate use of them.

EQUIPMENT.

The Equipment of Northwestern University Dental School, already excellent for teaching dentistry in all of its branches, is being continuously and rapidly improved.

The Main Office of the Secretary and Business Manager is on the fifth floor, and is divided from the great clinic room by a railing, and overlooks the clinic, and is always within easy reach of the individual student, the man who has business with the school, or the visitor.

The Main Office for Dispensing Material to Students is directly across the room from the Secretary's office, and the space between these forms the reception room for patients and visitors.

The Main Operative Clinic Room is eighty by one hundred feet and twenty feet from floor to ceiling, and accommodates one hundred and forty operators comfortably at one time. It is furnished with the latest and best pattern of Columbia operating chairs. The light is by windows upon three sides, one great skylight in the center, two-thirds the length of the room, and two smaller skylights at either side. Also for dark days and early dusk of winter afternoons, ample electric light is provided. Around three sides of this room above the windows, a gallery has been placed which in no way obstructs the light, and adds beauty to the room. In this are placed separate lockers with combination locks for each student in which to keep his engine, operating case, hat, wraps and operating coat.

VIEW IN THE GREAT CLINIC ROOM.

The Crown and Bridge Clinic Room opens off from the main operative clinic room, and is furnished with twenty New Columbia operating chairs, in which the clinical fitting of crowns, bridges and plates for artificial teeth is done. **The Senior Prosthetic Laboratory** is conveniently situated across the hall from this room and is furnished with benches, vises, electric ovens for baking porcelain, lockers for students' prosthetic instruments, and other appurtenances necessary to practical prosthetic dentistry.

The extracting room opening off from these rooms is conveniently situated, furnished with a Columbia operating chair, fountain spittoon, forceps, instrument cases and gas outfit and all the apparatus necessary for anesthesia, and is in constant charge of an assistant to the professor of oral surgery.

The Oral Surgery Clinic Room is also on the same floor across the hall and is so arranged as to bring the largest possible number of students near enough to satisfactorily observe clinical operations. It accommodates one hundred and seventy pupils at one time.

The Main Lecture Hall is on the same floor. It is furnished with tablet opera chairs of the best type and seats comfortably four hundred students. It is lighted with one great skylight in the dome, furnished with curtain for darkening the room for illustrative electric lantern work, has moving blackboards at the back of the speaker's area, and screen for lantern work, stationary blackboards on three sides, etc. Indeed, it is furnished with all of the modern appurtenances for teaching.

The Anatomical Laboratory is within easy reach of this lecture room, so that illustrative dissections are readily brought before the class. In this laboratory students do their work in sections, and under the efficient management of Professor Mix it is made one of the most interesting rooms in the building to the student.

Dropping now to the **fourth floor** one enters a long hall, the walls of which are filled from end to end with students' lockers.

The Freshman's Prosthetic Technic Room is entered at the south end of this hall. It is furnished with benches, drawers for instruments, and stools for two hundred and twenty-five students, an electric motor which runs a bank of grinding lathes, vulcanizing apparatus, a bank of wash bowls with running water, plaster tables, speaker's desk, an office for dispensing material to students, receiving boxes for accepted work of students, etc. In this room the freshmen are taught the first rudiments of prosthetic dentistry.

The Operative Technic Room is entered at the north end of the hall. It is lighted on three sides by large windows, and is provided with ample electric lights for dark days and for early dusk of winter afternoons. It has recently been enlarged and is now furnished with seats for two hundred and twenty students, each provided with bench, vise, and drawer for instruments. In this room dental anatomy and the rudiments of operative dentistry are taught.

The Private Office of the Dean opens off this hall near the operative technic room.

The Chemical Laboratory opens on the east of the hall. It has benches and drawers with complete outfit of chemicals, water and gas at each bench for ninety pupils at one time. The room is furnished also with furnaces of the best pattern for metallurgic work, making of solders, alloys, refining and assaying operations, refining and cleaning of scrap gold and other metals, alloys for amalgams, etc. The room is occupied mostly by the junior class. Close by the door of the Chemical Laboratory, another door leads into a small room furnished with fine balances or scales for delicate quantitative determinations in chemical studies.

The Junior Prosthetic Laboratory opens to the west from the hall. It is a large room, well lighted and furnished with benches, drawers and lockers for two hundred students at one time, and contains electric motor and bank of grinding lathes, vulcanizing outfit and electric porcelain apparatus, an office for the distribution of material and the reception of completed work, etc. It is used by the junior class.

The Physical Laboratory and general utility room is on the east of this hall. It is a large room and serves as a meeting place for the faculty and demonstrators for instruction in the general work of the institution and direction in the teaching methods of the school. It is furnished with cases in which much of the physical apparatus and illustrative material of the school is stored, and tables for their use by sections of students. Much class work is done here by different instructors. There are hundreds of large class charts and pictures, nearly a thousand lantern slides, boxed, numbered and catalogued, hundreds of microscopic slides, microscopes for special uses, physical apparatus for measuring the force with which the human teeth may be closed, for determining the force necessary in crushing different articles of food, for determining the strength of filling material, for determining shrinkage and expansion of amalgams, for determining the force used in packing gold and amalgam fillings, etc. Indeed all of the physical determinations required by dental students. New instruments are being added as rapidly as their value is developed.

The Bacteriological Laboratory is connected with the histological laboratory and is furnished with apparatus for the preparation of culture media. Thermostats and culture ovens, apparatus for staining and mounting micro-organisms, apparatus for testing the value of antiseptics, benches for practical instructive work, microscopes, electric lanterns, etc.

NEW EQUIPMENT.

Much new equipment was added last year in entirely new space on the third floor, comprising *a new lecture room, a new quiz room, a new postoffice and lunch room, a new study and reading room, a new library and a new museum.*

The Histological and Histo-Pathological Laboratory is removed to the third floor, and is one of the best for its purpose in the building. It is lighted by seven large windows, and in addition has electric lights for each bench for use on dark days. The benches are all of hardwood, nicely finished

and are furnished with lockers for instruments and apparatus. It is furnished with seventy microscopes and benches for seventy pupils at one time, though the sections are generally made much smaller. It is also furnished with numerous photographic illustrations of the tissues to be studied, electric lantern and screen with arrangements for dark room illustrative work, and more than five hundred lantern slides, apparatus for section cutting, staining and mounting of sections, aquaria and live boxes for the continuous growth of confervæ, animalcules, etc., for the illustration of cell life and cell function. This room is in charge of Prof. F. B. Noyes and is used mostly by the freshmen and junior classes in sections.

The New Quiz Room is furnished with one hundred and ten new opera chairs, blackboard and screen for lantern illustrative work, and other conveniences for teaching.

The New Lecture Room is well lighted and is furnished with two hundred and twenty-five tablet opera chairs, with blackboards, screens, and connections for electric lantern illustrative work, professors' ante-room, etc.

The New Reading Room will accommodate two hundred students at one time. It is well lighted on two sides and has chairs and tables where students may go at any time of the day for reading and for study and be assured of the most perfect quiet. No talking whatever is allowed.

The New Library is in the same room, divided from the Reading Room only by the arrangement of the museum cases. It already contains about three hundred running feet of shelving filled with books upon dentistry and correlated subjects and a well selected and rich library of encyclopedic literature, aside from a room devoted to the storage of unbound journals. It contains practically all of the books on dental subjects available published in the English language and nearly complete files of the journals. Of these latter from two to twelve complete sets have been obtained. Of the current dental journals one dozen copies of each come to this library. All of this literature is available for students and to the profession.

Old Books on Dentistry are still much needed. Alumni and dentists having old books not especially valuable to them should send them to us, and they will be catalogued and placed on the shelves.

The Museum of human and comparative dental anatomy, already very valuable to the student, is rapidly growing. It now contains skulls illustrating all of the principal variations of tooth forms of the animals, reptiles and fishes, and prepared skulls illustrating human dentition from birth to maturity. Skulls of different races and wild tribes of men, ancient and modern, are being gathered. Many specimens of irregular development of the human teeth, supernumerary teeth, teeth of anomalous forms and specimens illustrating the various phases of dental pathology, are already in the cases and more are being continually added.

Both the Library and Museum are open to members of the dental profession for the purpose of reference or study, and it is the request of the institution that the profession assist in the growth of the collection by donations of specimens of any nature suitable to the purposes of the Museum. Hundreds of specimens of anomalous development of the teeth and of pathological conditions are annually lost, which, if sent to us, will be appropriately labeled, the donor's name attached, placed in the cases, and become permanent and useful additions. This museum is continuously open to the dental profession.

THE NEW BUILDING.

This year the University adds, at a cost of half a million dollars, a new building, which will become the permanent home of the Dental School, and also of the School of Pharmacy and the School of Law. This building is situated on the southeast corner of Dearborn and Lake streets, and is especially convenient to reach from all lines of travel, both suburban and general, being within the down-town loop of the elevated roads. It is also within easy walking distance of a good boarding-house region. It has a frontage of 180 feet on Dearborn Street and a frontage of 160 feet on Lake

THE NEW BUILDING,

CORNER OF DEARBORN AND LAKE STREETS.

Street. It is six stories high and is substantially and elegantly built. The Dental School will occupy the two upper floors, which will be reconstructed especially for its accommodation and its permanent home. The floor space will be sufficient for the accommodation of seven hundred and fifty students comfortably, with lecture rooms, operating rooms and laboratories for its several departments.

The different schools in this building will be entirely separate from each other, with separate elevator entrances, and as distinct from each other as if they were in different buildings. The building will also contain the City Offices of the University and a large Assembly Hall for University gatherings, commencements and meetings of various sorts.

The University will obtain possession of this building on the first of next October, and the work of refitting for the dental school will then be pushed to completion as rapidly as possible, and as soon as this is done the dental school will be moved from its present quarters into its permanent home. This building will be one of the most perfect in its situation, in its arrangements and accommodations that has yet been devised for teaching dentistry.

COURSE OF STUDY.

The regular session of 1901-1902 will begin on Wednesday, October 2, 1901, and continue till the following May 1, 1902. The regular work of the school year will begin immediately upon the organization of the respective classes. The courses of instruction are progressive and extend over a period of three years, the teaching in one year not being repeated in the next. The pupils are strictly graded into Freshmen, Junior, and Senior classes, each having its separate and distinct courses of study. This division of classes in dental schools has been the work of years. Formerly the several classes listened to the same lectures all in a body. The division into distinct courses of study is complete in Northwestern University Dental School. No professor delivers lectures to more than one class at one time. Therefore in each class throughout the whole period the teaching

is directed solely to the particular class. In the operative and prosthetic clinic rooms the teaching by the corps of demonstrators is directed to the individual pupil and adapted to his individual needs. These are, therefore, occupied by the junior and senior classes in common.

A Resume of the several courses of study which follow will give a good idea of the work of the school:

General Anatomy is in charge of Professor Chas. L. Mix. Its study is begun in the freshman year and continued through the freshman and junior years. Under the able management of Professor Mix this is made one of the most interesting courses of study in the school. Anatomy is taught by recitations, quizzes, demonstrations, and lectures. The classes are subdivided into groups of twelve students. Each of these groups is under a competent quiz master, who conducts recitations on lessons previously assigned. For this work each quiz master is provided with dissected specimens by which to illustrate lessons assigned. In this way the class has the benefit to be derived from the study of the text book and dissected specimens before the subject is presented by the professor, and is better prepared to understand and retain the subject matter. In the museum there are dissected specimens for the use of students. In the anatomical laboratory students are required to dissect the whole body (in parts during the two years) and are under competent demonstrators.

Histology and the Histological Laboratory are in charge of Professor F. B. Noyes, who will give one lecture and two hours of laboratory study per week in both the freshman and junior years. In the laboratory work the class will be divided in sections. The freshman studies will begin with the vital manifestations and structure of the living cells as exhibited in the large, single cell animal and plant forms common in ponds and ditches, such as the amœba, vorticellæ, rotifers and infusoria. The single cell forms are followed by the study of the formation of cell masses, or tissues, using first the Algæ forming threads and sheets of cells and proceeding to those that form tissues of similar

cells. In these studies the various forms of the reproduction or multiplication of cells will be studied. Then the various elemental tissues of the animal, the epithelium, connective tissue, muscular tissue, and the nerves, are taken up. This work is done in the first semester. In the second semester the relations and arrangements of the elemental tissues in their combinations which form the organs of the body will be studied. The laboratory work will follow the order of the lectures, accompanied by regular text-book study. The lectures will be illustrated by a large number of photomicrographs thrown upon the screen with the electric lantern.

The Junior Year is devoted mostly to the teeth and related tissues. First, the bones and periosteum, then the dental tissues, the enamel, dentin, cementum, dental pulp and the peridental membranes. The enamel is studied with special reference to the arrangement of the enamel rods and their inclinations upon different parts of the crown, its lines of cleavage, its lines of strength and of weakness with relation to the preparation of the enamel walls and margins of cavities. The nature and structure of dentin with its system of dentinal tubes and fibrils. The cementum, its structure, functions and relation to the peridental membranes, its formation, destruction and repair. The dental pulp with relation to the formation of dentin and its structural elements with relation to pathological conditions. The structure and tissue of the peridental membrane in relation to its functions and its diseases. Sections of all of these tissues are prepared, mounted and studied in the laboratory and careful drawings made of them by each student, so that each may obtain that working knowledge of them so necessary in the practice of operative dentistry. The large collection of photomicrographs of these tissues used in the laboratory are of great assistance to the student. The development of the teeth is followed from the formation of the dental ridge to the completion of the formation of the teeth. In this work demonstrations in modeling clay clears up many difficulties.

Physiology will be under the management of Professor Wiggin, who has had much experience in teaching this sub-

ject to dental students. The course will include two lectures per week during the freshman year and one lecture per week during the junior year.

Operative Technics is under the management of Professor William E. Harper, who has had a long experience in this work. The subject is taught by lectures, illustrated by models, by demonstrations, and by exercises in manipulation by the students, under the personal direction of the professor and his assistants. The first two weeks are given mostly to the study of dental nomenclature, or the study of the names of things with which the student must become familiar in the course of his dental studies. Then descriptive human dental anatomy is taken up and the forms and surface markings of each tooth studied. This part of the work is illustrated by models enlarged about thirty times, enabling the professor to locate every detail of form and of surface markings upon the teeth so that they may be accurately understood. This method of illustration greatly facilitates the progress of the student.

After a lecture and a recitation upon a particular tooth the student selects several of that denomination from a large number of promiscuous teeth and files at least one longitudinal and two transverse sections for the study of the pulp chambers and root canals, together with their relations to the external surfaces of the tooth. This general plan is carried out with each tooth of the human mouth. In order that tooth forms may be more perfectly impressed upon the mind during this study, a carving of a tooth of each class, as the incisors, cuspids, bicuspids and molars, is made by each student in bone or ivory representing the actual size and form of the tooth. In this work the roughing out is done with the file, but the cutting of all the detail is done with the excavators that the student will afterward use in practice, he being required to grasp and use the instruments as he will do in operations in the mouth.

Instruments having now become in a degree familiar are taken up and their classification, the rules governing their construction, the range of useful forms, the names of each

under the descriptive formula plan, and their proper care, are made subjects of careful study. It is particularly essential that each student be familiar with the forms and uses of each instrument in his set. With this end in view he makes a model in brass of the working point (not the handles) of each to actual measurement and the special uses of each are carefully taught in connection with actual cavity preparation in extracted teeth, ivory and bone. In this work cavities are classified and models of each are made by each student. The requirements for the preparation of seats, the anchorage for fillings, and the forming and finishing of cavity margins, are carefully explained and strictly enforced. Special attention is given to the cleavage of the enamel, to its lines of strength, and to its lines of weakness, that these may be taken advantage of in practical work. In all of this the teaching of instrument grasps, finger rests for the perfect control of force, and the details of instrumentation, is continuous, and the same plans are continued and used in all the operative departments afterward by professors and demonstrators.

After the cavities have been passed upon by the professor or his assistants, the study of the working properties of cement, amalgam, and gold, and the instrumentation in their use, is studied and demonstrated, and the cavities filled by the student. This course is very important in the knowledge acquired, in the training of the hand and eye, and is interesting to the student.

NOTE.—The operations in the technic departments require a very large number of natural teeth, and a sufficient supply is sometimes difficult to get. It will therefore be to the interest of students if they will bring with them all the extracted teeth they can obtain.

The Junior Course in Operative Dentistry will be given by Professor Harper. The didactic course will consist of two lectures per week during the term. In this work Professor Harper will make a regular advance upon the work done in operative technics in the Freshman year, giving more definite application of the principles to the practical operations in the mouth. At the same time the students will begin putting the teachings into practice in the infirmary.

At first a brief review in lecture and quiz of dental nomenclature, and especially cavity nomenclature and instrument nomenclature, will be given to be sure that all students know these sufficiently well to proceed and follow the lectures understandingly. Then the subject of cavity preparation will be given in detail step by step. Cavities will be classified and the plans of the formation of each class will be given, together with the particular instrument to be used in each part, and the methods of instrumentation to be followed in each individual class of cavities.

After the lectures on Fridays Professor Harper will, during the first semester, take the class to the operative technic room for special drill in the instrumentation of cavity preparation, methods of cutting enamel, and especially the benefit to be derived by taking advantage of its cleavage and the directions in which it cuts easiest under the varying conditions in which it is presented in the mouth will be carefully demonstrated. The direction of the enamel rods on different portions of the crowns of the teeth, and the proper relation of the inclination of cavity walls to them will be studied. The forms of cavities in their relation to the stress of mastication, together with the forms of anchorage and the strength of fillings in the different classes of cases, will be presented. The final finish of margins will be demonstrated and taught with the purpose of bringing out the best efforts of the student in cavity preparation.

In the second semester the lectures will be continued and Professor Harper will demonstrate in the infirmary Friday afternoons, following out the methods taught in their application in the mouth.

It is intended that this junior course in operative dentistry shall be especially a drill in technical procedures in filling teeth.

The Department of Prosthetic Dentistry, in all of its branches, will be under the supervision of Professor Prothero, who gives this his whole time. He will deliver the lectures and manage in person and through his assist-

ants the quiz work and special lines of clinical instruction. This arrangement places all of the processes of clinical instruction under the control and direction of one professor, which prevents confusion in method and in the detail of technical procedures which so often confuse the student and cause loss of time in gaining a working knowledge of them.

Prosthetic Technics will occupy three hours per day, three days in the week, during the Freshman year, with one lecture per week. The lectures will accompany and cover the processes undertaken in the technic laboratory for each week, the student performing under competent demonstrators the operations and using the materials and appliances described in each lecture. The course will begin with taking impressions of the mouth for partial and full cases, using all of the various materials and appliances employed for that purpose. The manipulation of plaster-of-paris, preparing impressions for securing models, model making, and separating from impressions, making trial plates, occluding and waxing teeth in position, investment of cases, or flasking, description of vulcanizers and the processes of vulcanization, scraping, carving and polishing vulcanized cases, and methods of repairing vulcanite dentures, all of which will be illustrated by the practical work performed by the student in the laboratory.

Crown and Bridge Work.—Preparation of the roots of extracted teeth for bands, fitting bands, carving cusps in plaster and other material, making dies, swaging cusps, soldering cusps to bands, and finishing. Making porcelain-faced crowns, conforming bands and constructing cope, grinding and backing facing and fitting to cope, investing, soldering and finishing, constructing various forms of porcelain and metal dummies, assembling crowns and dummies previously constructed and forming bridges, investing, soldering and finishing.

Making dies and counter dies for metal work, including preparation of model and making sand impressions, conforming metal plate to die, and swaging, trimming and finishing swaged plate, occluding and waxing teeth in position, backing, investing and soldering; also attachment of teeth

with vulcanite, grinding, filing, scraping and finishing. This will include full and partial cases.

Making lower dentures of cast metal, including special preparation of model, waxing up, investing, casting and finishing cases.

It is the intention that this course shall render the student familiar with the various materials and processes used in prosthetic dentistry, train his hand in the performance of the mechanical work, and fit him for the more complex technic work and the practical prosthetic cases to follow in the junior year.

Metallurgy will also be presented by Professor Prothero in a short course of lectures during the freshman year, in which those metals used in dentistry will be the most prominently considered, as iron, steel, copper, zinc, tin, lead, aluminum, silver, gold and platinum.

The Instruction in Prosthetic Dentistry in the Junior Year will include one lecture per week, advanced technics and practical cases for patients. It will begin with a review of taking impressions and the processes in vulcanite and will include the details of working celluloid. The construction of gold plates, full and partial, and the working of aluminum in the making of cast plates and swaged plates, and the making of weighted dentures. Continuous gum work will also be introduced in this course. The principles of construction of all of the various crowns at present in use, the Logan, plain and banded, shell crowns and carving cusps and conforming them to the occlusion, porcelain faced crowns and porcelain crowns. Also a study of the stress applied by the muscles of mastication to the teeth, both singly and collectively, with its bearing upon crown and bridge construction, including the conditions under which bridges should or should not be used.

The Senior Year in Prosthetic Dentistry will be devoted more especially to infirmary practice, which will include the practical construction of the various crowns, bridges and plates of vulcanite, gold, aluminum, celluloid, continuous gum, etc., for patients, under the direction of Professor

Prothero and his demonstrators. An advanced lecture course will also be given, occupying one hour per week, for about one-half of the term, which will include new methods and appliances and reviews.

The Infirmary Prosthetic Practice will have its special demonstrating force, which devotes its whole time to this work, and the demonstrators will be sufficient in number to give much time to individual students, directing them as to methods and demonstrating points of especial difficulty as they present themselves.

General Pathology is presented by Professor Wiggin in one lecture per week during the junior year. This course, while essential to render the student intelligent as to general pathological conditions, forms the basis of his studies of the special pathology of the tissues of the teeth, their membranes and correlated tissues and organs of the mouth.

Comparative Dental Anatomy will be taught by Professor George A. Dorsey, Curator at the Field Columbian Museum. Professor Dorsey has given much attention to this subject in its practical and scientific aspects, has traveled much and gathered specimens in many parts of the world. He has personal acquaintance with most of the animals in their native places and with various wild tribes of men now living, and has visited the burial places of many of the extinct races and personally gathered many of the specimens from which his conclusions have been drawn. The course will consist of one lecture per week, followed with two hours in the museum. In the museum the class will be divided into convenient sections for the examination and study of specimens. In this course the student will study the animals, their food habits, the uses they make of their teeth, the forms of their teeth as related to food habits and as weapons of offense and defense. This will be followed by a study of the extinct species of animals of the several classes, the variations that have occurred in their tooth forms in the various geological ages, together with the development of the complex tooth forms from the

simple forms of the earlier animals, or the history of the origin and progress of the development of the tooth forms as they now exist in the animal world, and the uses made of this history by the geologist and students of natural history in the study of geological strata and of extinct species of animals.

Chemistry.— The value to be derived from a good understanding of the science of chemistry as associated with dentistry cannot be overestimated. Elementary Chemistry, which continues throughout the Freshman year, is taught entirely by lectures. These lectures are fully illustrated by experiments before the class. Particular attention is given to the metals and their ores, specimens of which are kept constantly before the class. In this course it is found most practicable to follow some standard text-book, the plan being to assign work in advance of the lectures, so that when the student enters the lecture he has some preparation on the subject under discussion. Freshmen students are required to attend two lectures a week.

Upon the Opening of the Junior Course the subject of Qualitative Analysis is taken up in the chemical laboratory, including abundant practice upon unknown mixtures and in the analysis of alloys, cement, teeth, etc.

Following this a thorough study of the various dental cements is made, including the testing of cements for injurious quantities of arsenic. This course includes the preparation by each student of a practical oxyphosphate cement which is free from arsenic.

The subject of alloys is next taken up, with particular attention to those used in dentistry. An alloy of an assigned formula is made and studied by each student. The work, from the weighing out of the metals to amalgamation and packing of the prepared material in cavities in specially prepared steel blocks, is done entirely by the student. After the fillings are made, microscopical examinations and micrometrical measurements follow and the student makes a complete report of the results. Somewhat over 200 alloys are made and examined, thus giving the student a thorough insight into the subject.

A course in solder making is next given, including the preparation of tin, gold and silver solders.

Refining metals is the next subject. Gold and silver scraps are refined and used in making solders, or alloyed and rolled into plate.

In addition to the ordinary outfit the laboratory is provided with a special large Hosking furnace and other forms of furnaces, rolling machines, anvils, balances, and many other forms of apparatus for this special course.

Junior students are required to spend three hours per week in the laboratory throughout the year.

Chemical Laboratory Deposit.— Before entering the Chemical Laboratory each student is required to make a deposit of $5.00 to cover chemicals used, breakage, expenses and special printed directions furnished each student. It has been found by experience that the above deposit covers the average expenses of the students throughout the year, so little, if any, of this is returnable. If, however, the student exceeds the deposit, he will be expected to pay the excess at the end of the course.

Materia Medica will be studied in the **Junior Year** and will be presented by Professor MaWhinney in one lecture a week, and frequent quizzes during the course, and will include:

A study of definitions, abbreviations, and terminology used, the nature of disease, the source of drugs in nature, preparations made from crude drugs, methods of administering medicines; agencies that modify their action; the art of prescribing, general classification of drugs; their physical, chemical and poisonous properties, dosage and antidotes, and therapeutic application.

The action of various important drugs will be illustrated upon lower animals, and a special study of antiseptics will be undertaken. Special attention will be given to those drugs that are of most value in the practice of dentistry.

In addition, students are required to make certain points in treatment of cases in the infirmary.

Special Pathology and Therapeutics will be presented to the **senior class** by Professor MaWhinney in two lectures per week during the term. This will be in a degree divided between Professor MaWhinney and Professor Black, the latter presenting dental caries and other diseases of the hard tissues of the teeth and Professor MaWhinney the remainder.

This course will include practice of antiseptic dentistry and general considerations in the treatment of disease, hyperæmia of the dental pulp, its causation, symptoms and treatment, inflammation of the dental pulp, suppuration, infarction and death of the organ, with detailed description of treatment in different conditions and stages of disease, modes of destroying and removing the dental pulp, and the treatment and filling of root canals. The treatment of teeth presented with pulps dead and decomposed, description and treatment of apical pericementitis and of the conditions leading to the formation of alveolar abscesses, with their symptomatology and the therapeutic management of this class of cases. The pathology, therapeutics and general management of alveolar abscess, both acute and chronic, the burrowing of pus among the muscles of the face and about the periosteum of the jaws, and kindred conditions.

Diseases of the peridental membranes beginning at the gingival margin (so-called pyorrhea alveolaris) will receive close attention. The different forms presented by this important group of diseases will be described in the lectures and illustrated by practical cases in the infirmary, and the treatment and general management of cases presenting the various characters followed under the direct supervision of Professor MaWhinney and the demonstrators. The methods of bleaching discolored teeth will receive careful attention.

The mitigation of pain in dental operations will receive especial attention, and the various means employed fully developed and explained, and such directions given as will enable the student to avoid methods and drugs that may be hurtful or dangerous to patients.

The infirmary clinic presents abundant illustrations of the various pathological conditions of the teeth and associate parts for the practical study of these conditions and their management, so that the observant student may become practically familiar with them.

Professor MaWhinney will be one-half day in each week in the infirmary clinic in personal teaching, explaining personally to students the meaning of various combinations of symptoms, pointing out and explaining the underlying pathological conditions, and directing students in the applicaton of remedies to special cases.

Experimental trial of drugs upon animals, illustrating their toxic effects, begun in the junior year, will be continued and extended in the senior year, especially those in use as local obtundants, or that exhibit poisonous properties that are in any wise dangerous to patients.

Operative Dentistry.—The senior course in operative dentistry will be given by Professor G. V. Black in connection with the course in bacteriology. The didactic course will occupy two lectures per week for the greater part of the year. A recitation course will be conducted giving a brief review of the work done in the junior year, in the preparation of cavities and other manipulative procedures. The lecture course will be more essentially a study of dental caries, the conditions of susceptibility and immunity to caries, its modes of attack, the means of its prevention and the management of filling operations for the prevention of its recurrence; the conditions under which extension of cavities for the prevention of the recurrence of caries should or should not be undertaken, the use of temporary fillings, especially for children, and the conditions necessary for permanent operations for children; the reasons for special methods in different classes of cases, and the general adaptation of operative procedures as curative and preventive measures, etc. It is intended that this shall be an advanced course in the general management of operative procedures, the foundation for which has been laid in the freshman and junior years.

The Operative Infirmary Clinic is under the direct supervision of Professor G. V. Black. The student begins this work with the beginning of his junior year and continues it to the end of the senior year, the time given to it being much greater in the senior year. It is the intention that this infirmary practice be as much like an actual dental practice as it is possible to make it. The development of the ability to obtain and hold a practice, or that professional comity between an operator and his patients essential to personal success, is regarded as parallel in its importance to the future of the student with the development of manipulative ability. In order that they may begin at once that practice by which this ability is developed, students are urged to bring their friends and acquaintances to the infirmary as their individual patients. Such patients will always be assigned as requested and become the patients of the individual student, and collectively will constitute his individual infirmary practice.

This practice, however, is, and must be, under the direction of the demonstrators in all of its details, from the primary examination upon the entrance of the patient to the clinic room to its completion. Of the many patients who come to the clinic room without individual preference as to operator, assignments will be made to the students who may need them for a beginning of their clinical practice or who may not have obtained a sufficient number.

The Demonstrating Force will be assigned to sections of the clinic room, and by a system of rotation each student will successively come under the direction of each demonstrator. The number of demonstrators will be ample to give a large amount of personal attention to each individual student in his section, consulting with him, directing his operations in detail and demonstrating points that may be new or difficult as they present themselves. This personal teaching is made a special feature of this school, and great attention is given by the management to the drill of the demonstrating force, in order that they may understand well their especial duties to the students and the methods of

instruction adopted and maintained in the school, and that their direction and actions may be in harmony throughout their clinical teaching. To insure this harmony of action and of method the demonstrating force is brought together once per week throughout the course, much of the time twice per week, for instructions and special drill in teaching methods and their especial duties.

In this great clinic, embracing several hundred patients per day, students have the opportunity to see and to study a wonderful variety of cases. They are made up of every variety of pathological condition, from the simplest deviation from the normal to the most grave conditions. A great variety of cases of irregularity of the teeth, impacted teeth, suppression of particular teeth, retention of deciduous teeth, atrophy of the teeth and of deformities of the teeth and of the jaws can be seen and studied. A careful observer will be able to see more of the pathological conditions of the teeth, deformities of the teeth, irregularities of the position, etc., in this great clinic than he would observe in many years of ordinary private practice. A practice of two years in such a clinic does more to fit a young man for the duties of the private practice of dentistry than many years of ordinary office observation could do.

The System of Credits for experience gained in clinical practice is such as to give each student a fair statement of what he has done. Instead of counting this by the number of cavities filled, great and small, as has been the custom, the credits are awarded in points. The basis of the point is a small pit cavity in the occlusal surface of a molar, the easiest cavity to fill. In case of other and more difficult cavities the credit is given in a number of points proportionate to the difficulties of the individual case. Therefore, no matter what the difficulties of the case, or the time required, the credits for experience gained will be in due proportion to the effort required. Hence students undertake and do all classes of cases, simple or difficult, with equal zeal.

In clinical operative dentistry each student of the senior class will be required to present a written description in detail of the conditions of the patient and of teeth requiring operation, and of the operative procedures in the preparation and filling of four cavities, two gold and two amalgam, done under the immediate supervision of Professor Black, or of assistants whom he may appoint for that purpose. Recent experience has shown this exercise to be a very important one to the advancement of the student.

Summer Clinics.—The clinic rooms will be open all the year for the benefit of students who may wish to have greater experience in clinical practice under competent supervision. The number of demonstrators during the summer will be ample for the class that may choose to remain with the school. The clinical material is abundant and a most excellent opportunity is afforded for clinical practice.

Bacteriology will form an important part of the senior course given by Professor Black. It will be presented especially in its relations to dental pathology and dental practice. The student will be familiarized with the general principles of the subject, with the nature of these growths, the place they occupy in nature, their physiological processes, how and where they grow, how they live, what they do, and how they produce disease. The differences between disease-producing and non-disease-producing organisms will be pointed out.

The micro-organisms of the human mouth will receive especial attention. They will be collected from patients in the infirmary and from members of the class in the lecture room, thus pointing out their natural habitat and the appearances produced by their natural growth. These will be cultivated in the various culture media, illustrating the growths as they appear to the naked eye in such ways as to illustrate the practical necessities of aseptic operating in dentistry, when and how dangers of infection arise, and how to avoid them. Species will be separated by plate culture, and pure growths of varieties obtained directly from

the mixed growths gathered from patients and students. The forms of growth as they appear to the naked eye on the various culture media will be studied in the lecture room and laboratory, and the microscopic characters of the organisms, plans of staining, mounting, etc., will be studied by sections in the laboratory.

Orthodontia will be taught both didactically and clinically. The subject will be taken up systematically, proceeding from the normal occlusion to explain the abnormal arrangements and faulty occlusion of the teeth and of the irregular forms of the dental arch. These derangements of alignment of the teeth and the malforms of the dental arch will be so classified as materially to assist the student in an understanding of them, and the means and mechanical arrangements of fixtures to bring the several classes of irregularities into normal form, or to the best possible form in individual cases in which the normal cannot be successfully reached.

In the clinical work there are often forty to fifty cases under observation and treatment at the same time, giving great opportunities for the study of clinical methods and their results. This demonstrative work will be contemporaneous with the lecture work, and all of the aids at present developed in methods of teaching this subject will be in use as occasion demands. The newer features of X-ray pictures for the determination of the positions of teeth that from any cause have failed to erupt at the normal time, and for determining the positions and forms of roots of teeth that are abnormally placed, are being used, demonstrating the value of this method of diagnosis in cases of special difficulty.

Oral Surgery.—Professor Thomas L. Gilmer will have charge of the department of Oral Surgery. One lecture per week and a clinic of one and a half to two hours per week, with appropriate quiz work, will be given during the term. The course will embrace instruction in the general principles of surgery and their practical application to pathological conditions occurring about the mouth and

face, giving especial attention to diagnosis and recognition of conditions requiring surgical interference. It will include the extraction of teeth with special attention to the difficulties encountered in cases of malposed and impacted teeth, the surgical treatment of facial defects and blemishes, the surgical treatment of alveolar abscess, the treatment of caries and necrosis of bones, fractures of the jaws, including the various devices and methods of fixing and retaining fractured and displaced bones in position. The treatment of diseases of the Antrum of Highmore, the diagnosis and removal of tumors occurring about the mouth and face, the exsection of nerves in the surgical treatment of persistent neuralgias, etc.

The whole clinical course will be an exemplification of aseptic and antiseptic surgery in its adaptation to, and uses in, the various phases of the surgical treatment of both accident and deliberate operative cases.

Anæsthesia will be presented in detail in lectures, experimentally upon animals and in clinical illustration, embracing all of the agents used for the mitigation of pain. Nitrous oxide will be exhibited daily in the extracting clinic, and ether and chloroform in the surgical clinic.

It is especially intended that this course of instruction shall embrace those conditions which the dentist is likely to meet in his practice, not omitting careful attention to the minor surgical operations which the dentist should ordinarily do for his patients, while giving an excellent basis of instruction to those who may aspire to a practice in oral surgery in the future.

Professional Ethics and Dental Jurisprudence will be presented by Professor Edmund Noyes and will occupy one lecture per week during the first semester. It will consist of a brief statement of the more important principles of morals, followed by an exposition of the special duties and moral obligations of professional men in respect to their patients, toward their fellow practitioners, and toward the public, for the upholding of the honor and dignity of the profession. The more important differences between the

professions and businesses or manufacturing pursuits will be explained, with reference to the ethical standards that are right and appropriate in each. The Professor and Faculty earnestly desire that students understand and appreciate the high standard of moral quality and devotion to duty which ought to characterize all professional men.

The lectures on Jurisprudence will, in the main, follow the text-book by Dr. Rehfuss. It will include qualifications and duties of expert witnesses, the importance of dental records, etc., as a means of identification, the limitations of dental practice, the qualifications required, and the liabilities incurred by those who administer anæsthetics, the penalties that may be suffered, and the defense to be made in case of real or supposed malpractice, and the liability in case of infection from instruments; the requirements of the Illinois law and the laws of other states respecting the practice of dentistry, the steps necessary to become legal practitioners, the duties and liabilities of dentists with reference to the law, etc. This course of lectures will be followed by an examination at its completion.

SUMMARY OF STUDIES.

FIRST YEAR.

Anatomy, two recitations or lectures per week during term.
Anatomy, dissecting the median half of the human body.
Physiology, to Nervous System, two lectures per week.
Histology, one lecture per week.
Histology, laboratory, two hours per week.
Chemistry, lectures and class work, two hours per week.
Operative Technics, three half days per week.
Prosthetic Technics, three half days per week.
Prosthetic Dentistry and Metallurgy, one lecture per week.
Quiz and study hours.

SECOND YEAR.

Anatomy, two recitations or lectures per week during term.
Anatomy, dissecting the median half of the human body.
Comparative Dental Anatomy, one hour per week.
Physiology, Nervous System, one lecture per week.
General Materia Medica and Therapeutics, one lecture per week.
Pathology, general, one lecture per week.
Chemistry, laboratory, three hours per week.

Histology, general and dental, one lecture per week.
Histology, laboratory, two hours per week.
Prosthetic Dentistry, one lecture per week.
Operative Dentistry, two lectures per week.
Prosthetic Dentistry, laboratory and infirmary practice.
Operative Dentistry, technics and infirmary practice.
Quiz and study hours.

THIRD YEAR.

Dental Pathology, two lectures per week.
Oral Surgery, one lecture per week.
Oral Surgery Clinics, two hours per week.
Orthodontia, one lecture per week.
Orthodontia Clinics, three hours per week.
Dental Jurisprudence and Ethics, about ten lectures.
Prosthetic Dentistry, one lecture per week.
Prosthetic Dentistry, laboratory and infirmary practice.
Operative Dentistry and Bacteriology, two lectures per week.
Operative Dentistry, Recitations, two hours per week.
Operative Dentistry, infirmary practice.
Quiz and study hours.

TEXT BOOKS.

FIRST YEAR.

Anatomy—Morris, Eckley.
Dental Anatomy—Black.
Technical Procedures in Filling Teeth—Black.
Physiology—Kirkes.
Chemistry—Hall.
Histology—Piersol.
Medical Dictionary—Duane, Gould, Thomas.

SECOND YEAR.

Anatomy—(Same as first year.)
Technical Procedures in Filling Teeth—Black.
Physiology—Kirkes. (Same as first year.)
Materia Medica—Hare.
Chemistry—Hall.
Comparative Anatomy—Thompson.

THIRD YEAR.

Technical Procedures in Filling Teeth—Black.
Oral Surgery—Marshall.
Orthodontia—Angle, Guilford, second edition.
Special Materia Medica—Hare.
Dental Jurisprudence—Rehfuss.

REFERENCE BOOKS.

American System of Dentistry.
Crown and Bridge Work—Evans.
Diseases and Injuries of the Teeth—Smale and Colyer.
Principles of Surgery—Senn.
The American Text-Book of Prosthetic Dentistry—Essig.
The American Text-Book of Operative Dentistry—Kirk.
Micro-Organisms—Abbott.
Micro-Organisms of the Human Mouth—Miller.
Dental Pathology and Pharmacology—Burchard.
Oral Surgery—Garretson.
Gray's Anatomy, Long's Chemistry, Tomes' Comparative Dental Anatomy.

INSTRUMENTS.

The instruments essential to the students in the several departments of the school have been carefully studied and determined. Much care has been bestowed upon the selection of the instrument sets that the variety of forms may be sufficient for the student's needs without being excessive. Close study of this subject and long and careful observation of students and the progress they make in the attainment of manipulative skill show their progress to be so closely related to their instrument equipment that this school must demand that the instrument sets *required* be obtained by each student as a condition of his continuance in school work.

It is found that a close adherence to the formula plan, in the study of cutting instruments particularly, is essential in teaching the important subject of cavity preparation; and this will be carried out critically in all departments of the school. This teaching is begun in the technic classes, and the same lines of instruction are followed progressively by teachers and demonstrators in all of the departments to the end of the Senior year, the same instrument sets being used throughout the course of study.

The instrument lists are *required* because they are essential to the student's progress, and students must provide them. *Students should not bring with them, nor purchase, instruments of other patterns, for they cannot be received as equivalents of the required sets.* They are the same as those required last year. No student is required to make changes in his instrument sets during his three years' course. *The instrument lists will be furnished on application.*

Written Quizzes and Examinations will be held by the various professors at intervals during the course, and especially at, or near, the end of the first semester, or from the 10th to the 12th of December. A few of these latter, espe-

NOTICE

The next regular session of Northwestern University Dental School will begin Wednesday, October 1, 1902, in the new building, purchased and equipped at a cost of three quarters of a million dollars, situated on the south-east corner of Dearborn and Lake Streets.

REQUIREMENTS FOR ADMISSION.

Students desiring to matriculate in this school must bring with them credentials signed by a state, county or city superintendent of schools or principal of high schools. These credentials must show the applicant to have progressed in his studies to the completion of the second year of high school or its equivalent; these credentials will not be required of applicants who present diplomas from high schools or colleges.

NOTE:—Students matriculating for the school session commencing October 1, 1902, are required to attend three regular courses of lectures of seven months each before graduation examinations. Those entering after that date will be required to take four regular courses of seven months each, commencing October 1, 1903.

cially in those lecture courses which terminate with the first semester, will be final examinations, and a few others will be final upon the subjects passed over. But, for the most part, they will take the form of written quizzes as an educational exercise and for determining the progress being made by the classes as a whole, and by the individual student. Past experience has shown that the written quiz is of great value to the student as a training in the formation of his ideas and in pointing out the particular lines of his strength or weakness and guiding him in his further studies.

The monthly reports of attendance, and the standing of pupils in quizzes, recitations, laboratory work and in infirmary practice, both operative and prosthetic, will be considered in making up the rating upon final examinations.

The final examinations will be held at the close of the term. Those of the senior class will begin on April 14th and be completed on the 19th. Those of the junior and freshman classes will begin April 21st and be completed on April 29th.

REQUIREMENTS FOR ADMISSION.

A radical change has been made by dental schools in the methods of examination for admission. Formerly these examinations were made by the officers of the Dental School, but the Faculties' Association, at the Omaha meeting in 1898, passed a rule requiring that these examinations be made by the legally constituted officers of instruction of the locality in which the applicant resides.

Therefore students desiring to matriculate in this school must bring with them credentials signed by a County or State Superintendent of Schools, a City Superintendent of Schools, or a principal of a high school.

These credentials must show the applicant to have progressed in his studies to the completion of the first year of the high school or its equivalent in order to entitle him to matriculate in this school for the term beginning in Octo-

ber, 1901. These credentials will not be required of applicants who present diplomas from high schools or colleges.

ADMISSION TO ADVANCED STANDING.

Students who present certificates of having taken courses in other recognized schools which cover subjects required in this school will be accredited with such studies if satisfactory to the professors in the respective departments.

REQUIREMENTS FOR GRADUATION.

The degree of Doctor of Dental Surgery is conferred on such students as complete the course of instruction, having attended three courses of lectures, the last of which must be in this school, and passed satisfactory examinations in all the subjects of study. To be admitted to the degree, the student must be twenty-one years of age, and possess a good moral character. He must have paid all fees in full.

The monthly reports of the quizzes and the infirmary practice of the students will bear very materially upon their standing at all examinations.

EXPENSES.

Fees are good until May 1st, 1902. The fees are payable in advance.

FIRST YEAR.

Matriculation Fee	$ 5.00
General Ticket	100.00
Histological Laboratory Ticket	5.00
Dissecting Fee (1 part)	10.00

SECOND YEAR.

Matriculation Fee	$ 5.00
General Ticket	100.00
Histological Laboratory Ticket	5.00
Dissecting Fee (1 part)	10.00

THIRD YEAR.

Matriculation Fee	$ 5.00
General Ticket	100.00
Final Examination Fee	20.00

Where it is so desired, the tuition fee may be divided into two parts, but in such cases an additional fee of $5.00 will be charged. Where the fee is so divided, $65.00 must be paid on or before the 20th day of October, 1901, and $60.00 must be paid on or before the 20th day of January, 1902.

These conditions cannot be modified except upon the written consent of the proper officials of the University.

A fee of five dollars must be deposited to cover chemicals and breakage in Chemical Laboratory.

All remittances, cheques, money orders, etc., should be made to the order of Wm. E. Harper, Secretary.

Good board and rooms convenient to the school can be obtained at prices varying from three dollars and a half to five dollars a week, according to the accommodations; also, vacant rooms, without board, furnished or unfurnished, can be obtained at from six dollars to ten dollars per month.

G. V. Black, Dean.

It is desirable that students should matriculate early, inasmuch as the order of assignment of seats is based upon the order of time in which they matriculate.

For further information and other literature relating to the Dental School, address,

Dr. W. E. Harper, Secretary,
Corner Madison and Franklin Streets,
Chicago, Illinois.

We have ready for the press our Annual Souvenir of half-tones, illustrating our school and equipment complete, which will be sent postpaid free upon application.

THE ACADEMY OF NORTHWESTERN UNIVERSITY.

To students pursuing studies preparatory to the Dental School, the Medical School or the School of Pharmacy, this Academy, located at Evanston, twelve miles from Chicago, offers peculiar advantages for special instruction.

For special circular address,

Rev. Herbert F. Fisk, Principal,
Evanston, Ills.

NOTICE.

The Library, Museum and Reading Room of Northwestern University Dental School is maintained especially for the benefit of its students, but incidentally for the whole dental profession. It is the intention that they shall be open to any dentist who may wish to look up any point, read any article, find any literature not contained in his private library, or to inspect any specimens in the Museum. Indeed, any member of the profession in good standing may have the use of this Library (under the ordinary library rules) by simply asking for an admission card.

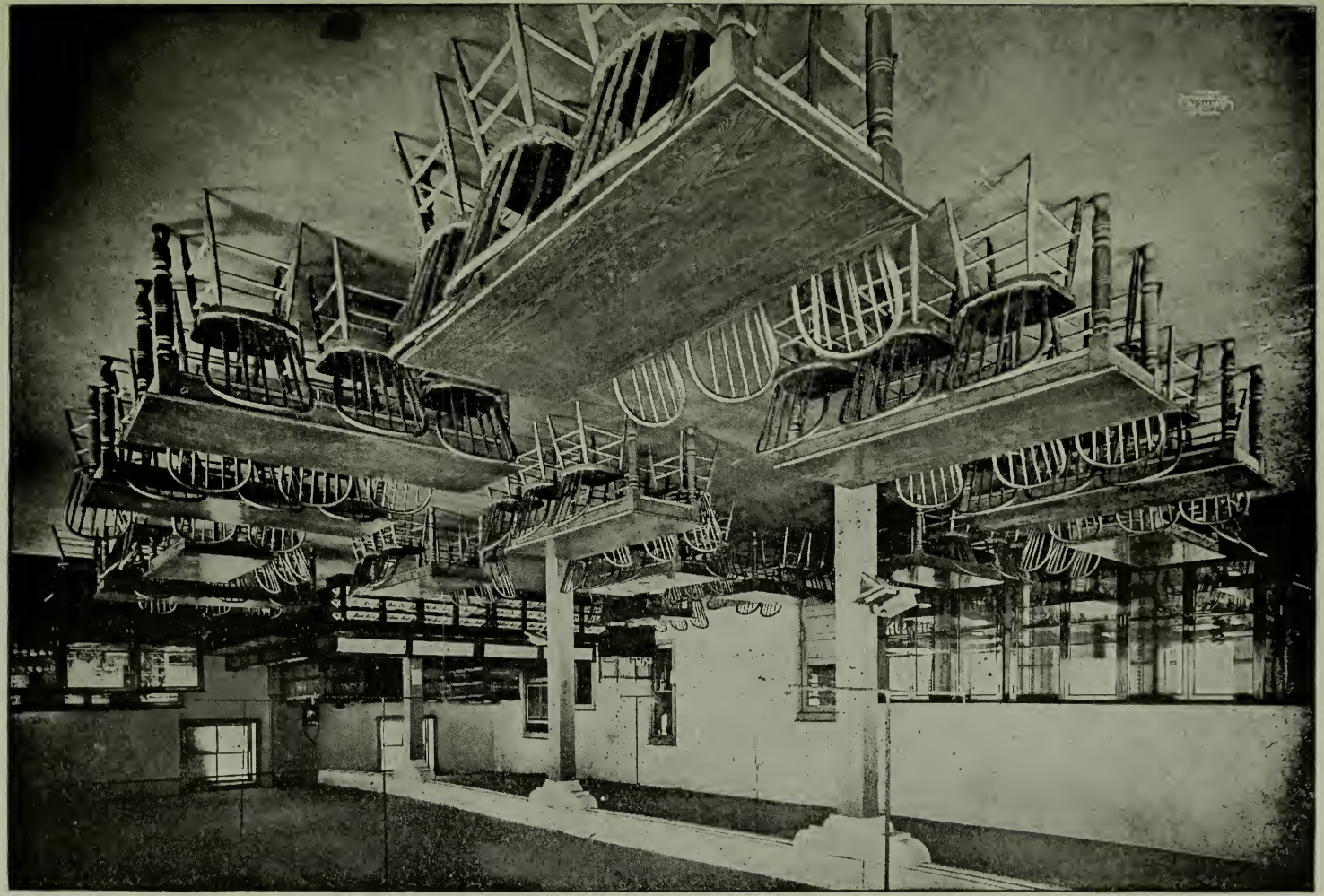
A Catalogue of the Library and Museum is now being prepared for publication and will be issued soon, and may be had by any member of the profession upon application.

To further the interests of this Library and Museum and render it more valuable to our students and the general profession, we ask donations of old books and magazines of every kind pertaining to dental subjects; (the older these are the more valuable to the Library) in order that we may render it more complete. There are many old books out of print, and which cannot be purchased, in the hands of dentists who do not especially care for them, that would become very valuable to this Library.

Specimens of Abnormal Teeth of every kind are wanted, every one of which will contribute to the completeness of this feature of the Museum. Many of these are lost every year, which, if sent to us, will be mounted, placed in the cases, properly labeled and classified, and become permanent additions of interest.

It is the intention that this Library and Museum be continually growing, both by purchase and by contributions, until it shall become the most complete store of recorded knowledge of dental subjects in the country, and that the dental profession of the great Northwest shall have in it a common interest.

All books and specimens donated to the Library or Museum will bear the donor's name on the label.



THE DENTAL SCHOOL.

SENIOR CLASS.

Ackerman, Charles, *Ill.*
Adkins, Robert Alfred, *Ill.*
Akers, John Rankin, *Ia.*
Anderson, Morley Walton, *Mich.*
Appel, Jr., Peter, *Colo.*
Atterberry, James Graham, *Neb.*
Austin, John Franklin, *Mich.*
Baasen, John Baptiste, *Minn.*
Baird, Guy B., *Neb.*
Baldwin, Arthur, *Ill.*
Baldwin, James Otho, *Ill.*
Beadles, Robert Oscar, *Ill.*
Beebe, William, *Minn.*
Behm, Louis John, *Mich.*
Benson, Joseph Lambert, *Ia.*
Bevan, James Ambrose, *Ill.*
Bishopp, John Alfred, *Ill.*
Blair, William Frederick, *Ont.*
Bohman, Otto Ferdinand, *Ill.*
Bowen, David Harley, *Ill.*
Bradshaw, Duane Franklin, *Ia.*
Brock, Harry Martin, *Ill.*
Brown, Ferdinand V. Garretson, *S. D.*
Burhans, Percy Alexander, *Ill.*
Burkhart, Charles Hickey, *Ia.*
Butler, Josephine K., *Ill.*
Butturff, Rolla Walter, *Ill.*
Cadwell, Clyde, *Ill.*
Carr, Samuel Lester, *Ia.*
Chapman, Wesley Harrison, *Wis.*
Clark, Thomas, *Mont.*
Clevenger, John William, *S. D.*
Coffin, Algie Bruce, *Neb.*
Cogley, Peter B., *Mich.*
Coleman, Thomas, *Mich.*
Collins, George Merrill, *Fla.*
Conley, Winifred, *Wis.*
Copple, Enos Eli, *Neb.*
Corbitt, George Burris, *Ont.*
Couvrette, George Joseph, *Minn.*
Cummins, Frank Lawrence, *Neb.*
Daly, Thomas Hogan, *Ill.*
Davis, Robert Kepler, *Ia.*
Day, Ernest Walter, *Minn.*
Deitch, Frank, *Mich.*
Doherty, Katharyne Alice, *Wis.*
Donahue, Michael Albert, *Ill.*
Demling, Edward Arthur, *Ill.*
Emery, Newton Wesley, *S. D.*
Ercanbrack, William Claude, *Ill.*
Erret, George Edwin, *Ia.*
Fagg, Dow Marcus, *Wis.*
Falloon, William Henry, *Quebec.*
Fawcett, Arthur Clayton, *Minn.*
Fleming, George K., *Colo.*
Frank, William Joseph, *Wis.*
Fritz, Thomas J., *Mich.*
Gansel, Alvin Robert, *Wis.*
Garrett, Frank Miles, *Ill.*
Gilbert, Orlando C., *Cal.*
Gilmore, John Michael, *Ont.*
Glass, Alfred Wilson, *Ill.*
Gordon, Howard Edward, *Ind.*
Gottfried, Charles Fredrick, Jr., *Mo.*
Gray, William Wallace, *S. D.*
Griffith, R. Allen, *Ill.*
Hacker, Albert Charles, *Wis.*
Hadfield, Harry Cook, *Ill.*
Hansen, Ca. Theodore, *Minn.*
Hawkes, Arthur John, *Ill.*
Heisey, David Judson, *Ia.*
Henline, Buell, *Ill.*
Hickman, Herbert Eugene, *Ind.*
Hines, Frank Benjamin, *Ill.*
Hoffer, James Jacob, *Wash.*
Hopwood, Olive Camille, *Neb.*
Horne, John Walter, *Scotland.*
Hotch, Louis Grant, *Ill.*
Howat, Aleck Densmore, *Ill.*
Hughes, David John, *Ill.*
Hull, Elmore Thellus, *Wis.*
Ireland, Ora Dell, *Ore.*

Isenberg, Hays Michael, *Ia.*
Jarrett, Oro Johnson, *Wis.*
Jensen, James, *Neb.*
Johnson, James Philip, *Ill.*
Jones, Carl Lewis, *Wis.*
† Jones, Harry, *Australia.*
Jordan, William Henry, *Ill.*
Kempter, Anton Raymond, *Wis.*
Kennedy, Arthur Inglesby, *Can.*
Kennedy, James Maddigan, *Ont.*
King, William Jasen, *Cal.*
Kingsbury, Archibald Morgan, *Minn.*
Knapp, George Guy, *Colo.*
Koch, George Robert Ferdinand, *Minn.*
Kramer, Charles Simon, *Neb.*
Kremers, Walter Gerhard, *Wis.*
Kruchevsky, Abe Samuel, *Ill.*
Krueger, George Eugene, *Ill.*
Lacy, Charles Benjamin, *Ia.*
Laidlaw, John S., *Ont.*
Landon, Vernon Orlando, *Ind.*
Latcham, Harry Earl, *Ia.*
Light, Frank D., *Ill.*
Linderoth, Nils Herman, *Ill.*
Lovitt, Charles Oscar, *Ill.*
Lunak, Joseph Francis, *Wis.*
† McAllister, Renaldo Eugene, *Ill.*
McCarty, William H., *Ill.*
McCormack, Arthur J., *Ia.*
McCoy, Thomas Roger, *Ia.*
McCrum, Thomas Benton, *Ind.*
† McCulloch, Thomas H., *Idaho.*
McGowan, John Stewart, *Ont.*
McMaster, William David, *Ia.*
McMennamy, Francis Earl, *Ill.*
McQuarrie, Kenneth, *Ont.*
Macdonald, John Rae, *Ill.*
Mack, George, *Mich.*
Mahle, Arthur Augustus, *Ill.*
Mathews, Lynn Duaine, *Ia.*
Mathieu, Wesley John, *Ill.*
Mathisen, Philip Leopold, *Minn.*
† Means, Jay, *Ill.*
Meeks, Daniel Homer, *Ill.*
Meves, Otto Charles, *Ia.*
Meyer, Walter Fred, *Ia.*
† Meyerhoff, Charles Leslie, *Ia.*
Miller, Charles S., *Ill.*
Miller, Frederick, *Minn.*
Miller, Gus, Jr., *Wis.*
Milligan, Edward Luke, *Man.*
Moore, Arthur Timothy, *Ill.*
Moore, Edward Clements, *Ill.*
* Mueller, Frida, *Germany.*
Nelson, Lewis J., *Wis.*
Nelson, Melvin Ray, *Ill.*
Newton, Herman Christian, *Wis.*
Nielsen, John Peter, *Ill.*
Nisbet, Marshall D., *Neb.*
Northwood, Reginald Charles, *Ont.*
Nunn, Webster Hamblin, *Neb.*
Orr, Clark, *Ill.*
Oyster, Harry W., *Ill.*
Page, Myrtle Jane, *Wis.*
Pellett, Frederick Nelson, *Ill.*
Pershing, Royal Strong, *Ill.*
Petry, John, *Ind.*
Phillips, Herbert, *Ill.*
Pottle, Curtis Brackett, *Ill.*
Puckett, Harry Clayton, *Ill.*
Purcell, William Michael, *Ill.*
Read, Ervin Clifton, *Ia.*
Reece, John S., *Ill.*
Reid, William Hutchinson, *Ill.*
Render, Alonzo Clarence, *Okla.*
Richards, George Theobald, *Wis.*
Rohwedder, Herman Harry, *Ill.*
Rossteuscher, Charles Ferdinand, *S. D.*
Ruckman, Robert Jasper, *Ore.*
Schneider, Adolph Emil, *Neb.*
Schneider, Leonard Julius, *Neb.*
Schoch, Andrew Clarence, *Ore.*
Schulze, Herman Julius, *Minn.*
Sears, Harry Elmer, *Ill.*
Sexmith, Lyman, *Wis.*

† Did not complete course.
* Special student.

Shanks, Robert Edward, *Wash.*
Shay, William, *Ill.*
Siebecker, William David, *Wis.*
Sinks, Omer Francis, *Ind.*
Skogsborg, Gunnar Herman, *Sweden.*
Smith, Charles William, *Ill.*
Smith, Ernest Ray, *Wis.*
Smock, Grant Hibbard, *Pa.*
Spalding, John Grant, *Pa.*
Stevenson, Robert Alexander, *Minn.*
* Stier, Carl, *Germany.*
Stoffel, Earl Noble, *Ia.*
Stokes, Hiram Chandler, *Ill.*
Strauss, Milton William, *Ind.*
Stroeter, George Williams, *Mo.*
Sweney, James Thomas, *Ia.*
Taylor, Lemmie Em, *Tenn.*
Thomas, William Albert, *Wis.*
Thompson, Joseph Ferdinand, *Wis.*
Tichy, Joseph, Jr., *Ill.*
Todd, Paul Ives, *Cal.*
Treen, Thomas Ottaway, *Cal.*
Tristram, George Thomas, *Ore.*
† Trumbull, Rollin Smith, *Ill.*
Vogan, John Wilbur, *La.*
Wait, Mark Leroy, *Ill.*
Waldberg, Ben, *Ill.*
Walsh, William Henry, *Ill.*
Waters, Frederick Horace, *Ia.*
Wentworth, George Wilton, *Wis.*
Werner, Edward August, *Mich.*
Whitson, Oscar Leroy, *Ia.*
Wickham, John Elwood, *Ohio.*
Wilson Earl Emmans, *Minn.*
Wisman, Oscar James, *Ohio.*
Wolfe, Morris Russell, *Kan.*
Wyatt, Eugene Ripley, *Tenn.*
† Wygant, Henry Edward, *Mich.*
Young, Merle Dempster, *Ill.*

JUNIOR CLASS.

Allan, Maxwell Sedgwick, *Australia.*
Baker, Josiah William, *Ill.*
Bales, Emmor S., *Ia.*
Ballou, Louis L., *Mich.*
Bannister, Guy, *Mich.*
Barber, Henry Edward, *Tex.*
Bascombe, Clifford Henry, *Ia.*
Baumgarth, Henry, *Wis.*
Behm, John William, *Ill.*
Bell, John Rex, *Neb.*
Bergman, Arthur Gustave, *Ill.*
Berkey, Hugh Thomas, *Ind.*
Bilek, Joseph Bartley, *Austria.*
Bixby, Raymond Lee, *Ia.*
Bjerke, Hans Kristian, *Norway.*
Bliss, Gertrude Richards, *Ill.*
Blount, Anna Bailey, *Ill.*
Blumenthal, Edwin Martin, *Ohio.*
Bohrer, Ernest Everet, *Mo.*
Bollenbach, George William, *Ill.*
Bond, John Lofferty, *Ind.*
Borchers, Fred, *Ia.*
Bostwick, Frank Brown, *Ohio.*
Boyd, Derward James, *Ont.*
Brandt, Carl Rudolph, *Ia.*
Brant, Claude, *Ind.*
Burrill, Chester Leslie, *Minn.*
Bushnell, Charles William, *Wis.*
Caldwell, Wm. Elliott Hughes, *W. Va.*
Callow, Joseph Edward, *Wis.*
Campbell, Peter Alexander, *Ont.*
Childs, Ralph Sherman, *Ill.*
Colborn, Lewis Paul, *N. D.*
Constable, Roy Verner, *Ill.*
Copple, Plenna Reuben, *Neb.*
Corbett, James Clinton, *Ill.*
Corbin, Byron J., *Ill.*
Cory, Wm. M., Mich.
Cromb, John R., *Minn.*
Daniels, Charles Lyle, *Pa.*
Davis, Charles Everett, *Wis.*
Dorothy, Michael Joseph, *Ill.*
Dryden, James Mair, *Ont.*
Dupuy, Thomas Mille, *La.*

† Did not complete course.
* Special student. Not candidate for degree.

Eaton, Charles David, *Ill.*
Eckford, John, *Ont.*
Ellis, Arthur J., *Cal.*
Ellis, William Harry, *Miss.*
Engel, George Louis, *Ill.*
Fisher, Frank Edward, *Ohio.*
Flachtemeier, Arthur Frederic, *Ill.*
Fleming, James Clinton, *Wis.*
Foster, Charles Gelutiah, *Ia.*
Freese, Ernest Clyde, *Ind.*
Fuller, Clark Anthony, *Wis.*
Galligan, Thomas Francis, *Ia.*
Geiger, Emil, *Ill.*
Gilchrist, Mont Rankin, *N. B.*
Gill, John Hunter, *Ill.*
Goodman, George Oscar, *S. D.*
Gregg, Edwin Stanton, *Ohio.*
Griffith, Edmund Llewellyn, *Ill.*
Grotewohl, Jessie Louise, *Ia.*
Guerne, Alfred Augustus, *Cal.*
Hadley, Chauncey Joseph, *Ia.*
Hammond, Roscoe Brant, *Okla.*
Hancock, Herbert Harold, *Wis.*
Hardie, John James, *Ill.*
Hayes, Ira Paul, *Neb.*
Headley, Sidney, *Mich.*
Hemphill, Wilbur J., *Ia.*
Hess, John Edward Burt, *Wis.*
Hicks, William Herbert, *Ia.*
Himes, Jennie Eva, *S. D.*
Hodge, Hugh Wallace, *Mo.*
Holin, Oscar Serenus, *Ill.*
Hullhurst, Lewis, *Neb.*
Hutchinson, Floyd Milton, *Ia.*
Johnson, Charles Emil, *Minn.*
Jones, John Paul, *Ill.*
Keller, David H., *Ill.*
Kennedy, George Alexander, *Ont.*
Kenyon, Ronald Bush, *Ill.*
Kern, Max Stienke, *Wis.*
Kernan, Joseph Francis, *Kan.*
Kitchen, Curtis John Burwell, *Ont.*
Kleinecke, Louis Christian, *Tex.*
Kruchevsky, Samuel, *Ill.*
Lasker, Herman, *Ill.*
Lawrence, James Walter, *Wis.*
Ledbetter, Marion A., *Ia.*
Lippert, Joseph, *Ill.*
Lynn, Austin Ames, *Ia.*
Lynn, Emery Collins, *Ia.*
MacMilan, William Duncan, *Minn.*
McCallum, Frederick William, *Ind.*
McDonough, Joe Chapman, *Ill.*
McLaughlin, Frank James, *Ia.*
McMaster, Glenn, *Ia.*
McStay, Earl Edward, *Ia.*
Macpherson, Egbert Earl, *Ill.*
Maginnis, Eugene, *Ia.*
Mason, George Neil, *Ill.*
Maurer, Nellie Ethel, *Neb.*
Michalski, Frank Alfonzo, *Wis.*
Miller, Lewis Marcus, *Neb.*
Minnis, Harry Lee, *Ill.*
Mullican, Lorenza Alverado, *Ind.*
Munson, Robert Hoyle, *Ia.*
Nelson, William, *Ia.*
Niswander, Charles Harvey, *Ia.*
O'Brien, John Denis, *Minn.*
O'Connel, John Joseph, *Mass.*
Opland, Joseph Segwart, *S. D.*
Parkinson, David Talbott, *Kan.*
Parks, Pearl, *Ill.*
Parks, Robert Smith, *Tenn.*
Peterson, Walter Emil, *Minn.*
Piner, Henry Edward, *Ia.*
Polin, Oscar Martin, *Wis.*
Pool, Hardy Fayette, *Ia.*
Poundstone, George Corwin, *Ill.*
Price, Frederick Orion, *Ia.*
Proctor, William Orson, *Mo.*
Reese, Elmo David, *Wis.*
Reible, George, *Wis.*
Reichert, Charles Scott, *Ia.*
Richards, William Freeman, *Cal.*
Ritson, Joseph Henry, *Mich.*
Sanford, Charles Wesley, *Wis.*
Shill, John Edward, *Ind.*

Shumaker, Frank Mead, *Ill.*
Silverberg, Henry M., *Ill.*
Sinn, Jens Johannes, *Ia.*
Smalley, Irwin Delos, *Wis.*
Smith, Daniel Hallie, *Ill.*
Smith, George Hill, *Ill.*
Smith, Julius Waldo, *Minn.*
Spencer, Edward Albert, *Can.*
Speir, Ernest Arthur, *Australia.*
Spindlo, Thomas Henwood, *Eng.*
Spires, Louis Edward, *Ohio.*
Stanley, William Raymond, *Minn.*
Stevens, Wirt Allen, *Ill.*
Stokes, John Francis, *Ill.*
Swigert, George Orton, *Ill.*
Thomas, David Ellis, *Wis.*
Thomas, Edward Smith, *Ill.*
Thomas, Lewis Edwin, *Ill.*
Thompson, Edwin Cook, *Ill.*
Thompson, Fletcher Hillard, *Ill.*
Tower, Ray Leighton, *S. D.*
Tyler, Alva Dwane, *Mich.*
Uglow, Stanley John, *Can.*
Ulvestad, Oliver Martin, *Minn.*
Waddell, William M., *Utah.*
Weir, William Arnold, *Can.*
Weyhe, Henry Theodore, *Minn.*
Williams, Fred Hayes, *Ind.*
Williams, Leonard Alphonze, *Ill.*
Wolfe, Edwin Ferdinand, *Wis.*
Zederbaum, George, *Ill.*
Ziegler, Horace Allen, *Ill.*
Zimmerman, Henry Thomas, *Minn.*

SPECIAL.

Horne, John Walter, *Scotland.*

FRESHMAN CLASS.

Addison, Earl Stanley, *S. D.*
Aren, Mrs. Pauline, *Ill.*
Bacon, Lee Ashley, *Ill.*
Baker, Charles Reeder, *Ia.*
Baker, John Ellsworth, *Wis.*
Bane, Raymond Waldo, *Ill.*
Barber, Edward Sutherland, *S. D.*
Beaumont, Gulie Alexander, *Tex.*
Belknap, Henry Wales, *Ill.*
Bergbom, George Nathaniel, *Ill.*
Bever, Charles B., *Ia.*
Blackmore, Earl James, *Mich.*
Blaisdell, Edward Ward, *Minn.*
Blake, William E., *Ore.*
Borjesson, Clarence Edward, *Minn.*
Bradley, Howard, Alansen, *Ill.*
Bronson, Almon Edson, *Ia.*
Brunner, Albert Henry, *Ia.*
Carlile, Walter W., *Minn.*
Christie, Herbert Franklin, *Man.*
Church, Truman Tracy, *S. D.*
Churchill, Lester Frank, *Ill.*
Clare, Patrick Henry, *Ill.*
Courtice, Andrew John, *Can.*
Craig, William Pollock, *Pa.*
Crane, Edwin A., *Ill.*
Dautrieve, Albert Joseph, *La.*
Dewey, Hervert Chester, *Ill.*
Dodge, Morton Stanley, *Wis.*
Dodge, Wilbert Jacob, *Minn.*
Doerbecker, John, *Ill.*
Calvert, Alvah Wort, *Ind.*
Cannon, Mrs. Mae, *S. D.*
Carlene, Mrs. Helfrid, *Ill.*
Burbank, Glen C., *Cal.*
Not in attendance.
Edgar, William, *Ill.*
Ekstrom, Ernest Sune, *Ill.*
Fisher, Ambrose Terry, *Mich.*
Forrest, Miss Elvira, *Ind.*
Fox, George, *Ill.*
Gahlman, Edward Frank, *Wis.*
Gibson, Charles Albert, *Ia.*
Gottlieb, David Hart, *Ore.*
Greeley, Harold Wilcox, *Ill.*

Grinde, Seward Clarence, *Wis.*
Grove, George Carlton, *Ill.*
Harder, Louis Frank, *Wis.*
Hart, Charles Simpson, *Ill.*
Hegge, Edward Nelson, *Wis.*
Heller, Matthew, *Ill.*
Heymar, Alfred, *Poland.*
Hilbert, John Carlton, *Wis.*
Hopper, Charles, *Ill.*
Huber, Charles Robert, *Ia.*
Huff, Robert E., *Mich.*
Hughes, John Michael, *Wis.*
Humphreys, George, *Cal.*
Ilseng, Andrew.
Ingersoll, Francis Byron, *Ind.*
Jackson, George Raymond, *Ill.*
Janes, Charles Alonzo, *Wash.*
Jenkins, Elbert Clyde, *O.*
Kerfoot, Newman Jackson, *N. D.*
Kessler, J. Warren, *Ind.*
Kocher, William, *Ill.*
Laffitte, Herman James, *Wis.*
Lampe, Carl Henry, *S. D.*
Land, John Adolph, *Germany.*
Lawrence, Ivy Garfield, *Ill.*
Linaker, George Henry, *Ill.*
Lind, Adam, *Ill.*
McAvoy, Robert Chris, *Can.*
McGaw, Andrew Ernest, *N. D.*
McNinch, Joseph Scott, *Ind.*
McElroy, Joseph D., *Ill.*
Mailer, Harry Orlandy, *Minn.*
Maxwell, Roscoe Conklin, *Ia.*
Miller, James Madison, *Mich.*
Miller, Robert Tatham, *Ill.*
Mitchell, William Arthur, *Ill.*
Moore, Dwight Edwin, *Ill.*
Mullen, George Martin, *Neb.*
Mullen, Joseph Henry, *Neb.*
Mullen, William Henry, *Neb.*
Murphy, Lloyd Lawrence, *Minn.*
Norman, Mrs. Sarah C., *Kan.*
Normoyle, Dennis James, *Ill.*
Olson, Aaron Miles, *Ill.*
Packard, Gerald J., *Neb.*
Packson, Ernest Shear, *Kan.*
Patton, Murray Albert, *Cal.*
Peacock, Mark Stanley, *Man.*
Phillips, Jesse W., *Minn.*
Phillips, Warren Byron, *Minn.*
Pierce, Loren George, *Ia.*
Redmond, George Hamilton, *Kan.*
Roberts, Rufus James, *Wis.*
Robertson, Arthur Hayes, *Wis.*
Ross, Herbert, *Can.*
Rothlisberger, Bruce G., *Minn.*
Runner, Charles Frederick, *Ill.*
Sanberg, Frank E., *Minn.*
Sauer, Andrew William, *Ia.*
Schmidt, Oscar Charles, *Ia.*
Schultz, Otto Henry, *Ill.*
Shiels, Guy James, *Wis.*
Schmuck, Emil A., *Minn.*
Shipstead, Henry S., *Minn.*
Skelly, William Joseph, *Ill.*
Sloan, Frank Twiss, *Ia.*
Smith, Austin Ora, *Ill.*
Smith, Charles Edward, *Ill.*
Smith, Perry Lee, *Ill.*
Thayer, William John, *Ill.*
Theile, Alvin A., *Ia.*
Trompen, Andrew Nicholas, *Ind.*
Waddell, James Clark, *Ill.*
Wagoner, Ben, *Ill.*
Walkow, Henry Emil, *Wis.*
Weaver, Harold Townsend, *Neb.*
Welke, John Jay, *Ohio.*
Welsh, Isabella Brown, *Ia.*
Welsh, Stanley Carpenter, *Wis.*
Wenner, Alvah Leroy, *Ill.*
Wick, William Walter, *Ill.*
Woolson, Bert H., *Minn.*
Yeamans, Edwin Glenway, *S. D.*

SPECIAL COURSE.

Perrigo, Charles H., *Ill.*

YOUNG MEN'S CHRISTIAN ASSOCIATION.

The Young Men's Christian Association of Northwestern University Dental School is an organization among the students of the school, the purpose of which is to do Christian work for students. You are invited to become acquainted with its work. In addition to meetings, Bible classes, and other religious work, it has made special arrangements to carry out the following:

1. **Information Bureau.**—During the opening days of the school a number of upper class men will be at the office of the Dental School to meet all new students and help them in any way to get started on their year's work.

2. **Boarding House Lists.**—Previous to the opening of the school a committee will have personally inspected a large number of suitable rooms and boarding places which they can recommend to students. This will greatly assist in getting comfortably located.

3. **Handbooks.**—The Association has issued a leather-bound vest pocket handbook, containing useful information regarding the Dental School, the Y. M. C. A., and the city. These will be given to every student on application. A special edition for mailing has been gotten out and will be sent to any one addressing the president of the Association.

4. **New Students** notifying us of the time and place of their arrival will be met at the station by one of our number wearing the Y. M. C. A. badge.

5. **Correspondence.**—Any further information regarding the Dental School, city or Association can be secured by writing the president of the Association, C. L. Daniels, N. U. D. S., 146 Franklin St.

THE ALUMNI ASSOCIATION OF NORTHWESTERN UNIVERSITY DENTAL SCHOOL.

OFFICERS FOR 1901-1902.

President, A. V. Hargett, D.D.S., Venetian Building, Chicago.
First Vice-President, C. E. Coy, D.D.S., Pullman, Ill.
Second Vice-President, Fred W. Parker, D.D.S., 146 Franklin St., Chicago.
Treasurer W. E. Harper, D.D.S., 3441 Wabash Avenue, Chicago.
Secretary, G. B. Macfarlane D.D.S., 70 State Street, Chicago.

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Henry A. Ware, D.D.S., 204 Cass Street, Chicago.
E. B. Jacobs, D.D.S., Stewart Building.

The object of this Association shall be to revive pleasant memories and develop new pledges of brotherhood and friendship by meeting at intervals for social intercourse and mutual counsel.

There will be a clinic held once a year, where the latest and best methods in dentistry will be presented to the members by competent clinicians.

The next clinic will be held in February, at Northwestern University Dental School, corner of Franklin and Madison streets, Chicago, followed by a collation in the evening.

The annual meeting will be held at that time, and all members are requested to be present.

Any graduate of Northwestern University Dental School may become a member upon payment of the membership fee of $1.00 and the annual dues of 50 cents.

Any graduate of the University Dental College, or the American College of Dental Surgery, may become a member upon presentation of a certificate signed by the Dean and Secretary of Northwestern University Dental School, accompanied by the membership fee.

All graduates of the School are urged to join this Association and share in the mutual benefits derived from the maintenance of fraternal intercourse, and that they may keep in touch with each other and with their Alma Mater.

For any information address the secretary,

Geo. B. Macfarlane
Room 406, 70 State Street, Chicago, Ill.

THE

SCHOOL OF PHARMACY

OF

NORTHWESTERN UNIVERSITY

(ILLINOIS COLLEGE OF PHARMACY, CHICAGO.)

The sixteenth year of the School of Pharmacy begins September 23d, 1901.

It is the largest institution of its kind west of the Atlantic coast states.

Its equipment is unsurpassed.

The laboratories include a General Chemical Laboratory, a General Pharmaceutical Laboratory, the Laboratory for Botany and Pharmacography, the Dispensing Laboratory, the Laboratory for Analytical Pharmaceutical Chemistry and the Bacteriological Laboratory.

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For further information, apply to the Dean of the School, Prof. Oscar Oldberg, 2421 Dearborn Street, Chicago.

NORTHWESTERN UNIVERSITY

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(CHICAGO MEDICAL COLLEGE)

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The following hospitals are affiliated: Mercy Hospital, 500 beds; Wesley Hospital, 200 beds; St. Luke's Hospital, 250 beds; Provident Hospital, 100 beds. Our dispensary treats over 26,000 patients annually.

For further information address the secretary,

DR. N. S. DAVIS, JR., DEAN,

2431 Dearborn St., Chicago, Ill.